FACT SHEET FOR STATE WASTE DISCHARGE PERMIT ST-8089

Pepper Bridge Winery

SUMMARY

Applicant:	Pepper Bridge Winery
Facility Name and Address:	Pepper Bridge Winery 1704 J.B. George Road Walla Walla, WA 99362
Type of Treatment:	Membrane Lined, non-overflow lagoon
Design Flow:	988 maximum daily flow
POTW Location:	1704 J.B. George Road Walla Walla, WA 99362 SE¼, NE¼, Sec12, T.6 N., R.36 E.W.M. Latitude: 46° 00' 42"N Longitude: 118° 22' 17"W

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INTRODUCTION

This fact sheet is a companion document to the draft State Waste Discharge Permit No. **ST-8089** . The Department of Ecology (the Department) is proposing to issue this permit, which will allow discharge of wastewater to waters of the State of Washington. This fact sheet explains the nature of the proposed discharge, the Department's decisions on limiting the pollutants in the wastewater, and the regulatory and technical bases for those decisions.

Washington State law (RCW 90.48.080 and 90.48.162) requires that a permit be issued before discharge of wastewater to waters of the state is allowed. Regulations adopted by the state include procedures for issuing permits (Chapter 173-216 WAC), and water quality criteria for ground waters (Chapter 173-200 WAC). They also establish requirements which are to be included in the permit.

This fact sheet and draft permit are available for review by interested persons as described in Appendix A--Public Involvement Information.

The fact sheet and draft permit have been reviewed by the Permittee. Errors and omissions identified in these reviews have been corrected before going to public notice. After the public comment period has closed, the Department will summarize the substantive comments and the response to each comment. The summary and response to comments will become part of the file on the permit and parties submitting comments will receive a copy of the Department's response. The fact sheet will not be revised. Changes to the permit will be addressed in Appendix D--Response to Comments.

GENERAL INFORMATION	
Applicant	Pepper Bridge Winery
Facility Name and Address	Pepper Bridge Winery 1704 J.B. George Road; Walla Walla, WA 99362
Type of Facility	Winery
Type of Treatment:	Aerated, membrane-lined, evaporative lagoon
Discharge Location	Latitude: 46° 00' 42" N Longitude: 118° 22' 17" W.
Legal Description of Application Area	SE¼, NE¼, Sec12, T.6 N., R.36 E.W.M. Latitude: 46° 00' 42" N. Longitude: 118° 22' 17" W.
Contact at Facility	Name: Tim Kerrigan, Cellar Master Telephone #: (509) 525-6502
Responsible Official	Name: Norm McKibben Title: Managing Partner Address: 1704 J.B. George Road; Walla Walla, WA 99362

BACKGROUND INFORMATION

DESCRIPTION OF THE FACILITY

HISTORY

Pepper Bridge Winery is a small Walla Walla winery that seeks to produce ultra-premium, world-class red wines with grapes sourced solely from the Walla Walla Appellation. The facility is located southwest of Walla Walla near the Washington Oregon border. The original on-site waste disposal system was approved in 1999 for 15,600 gallon or 6500 cases per maximum capacity.

In anticipation of expanded production up to 12,600 cases per year, Pepper Bridge completed an engineering analysis and constructed a lined, non-overflow 700,000 gallon pond. This permit addresses the new wastewater system and the expanded production levels.

INDUSTRIAL PROCESSES

The primary input into the system is process water from wine making. During crush, September through early November, portable crushing equipment is placed near the north entrance to the winery. The crusher separates the leaves and stems from the grapes, with some rupture of the grape skin. The leaves and stems are collected and returned as organic matter to the vineyard. The grapes, including skin and seeds, flow into the fermentation tank. The grapes and the juices pass through a sequence of fermentation and separation processes before being stored in oak barrels for aging. The final production process is the bottling of the wines.

Filtered, heated and pressurized groundwater is used to clean the crushing equipment, fermentation tanks, barrels and floors on a daily basis. The process water from cleaning operations undergoes screening before being discharged to the existing septic tank, which will remain in the treatment process, and then is pumped to the lined lagoon. Organic solids collected on the screens are returned to the vineyard.

TREATMENT PROCESSES

The treatment process includes the septic tank, duplex 100 gpm pumps to lift the wastewater to the lagoon, which is located southeast of the winery and finally a 700,000 gallon pond. The pond contains a device called the CirCulator, which provides nominal aeration of the ponds. This device is primarily for odor abatement.

DISTRIBUTION SYSTEM

Current plans involve evaporation of the contents of the lagoon as disposal. Eventually, and especially if winery production increases, there are plans for land application of the lagoon wastewater. The testing required in this permit will be used to determine the efficacy of land application using current process units, or whether additional treatment will be necessary for future disposal.

GROUND WATER

Groundwater was not evaluated for this facility. As part of this permit, a scope of work for a hydrogeologic study will be submitted for review and approval. The results of the study will be used to site one upgradient and one downgradient well for monitoring of leakage from the pond and can be used, eventually, for monitoring of land application discharge to the ground water.

PERMIT STATUS

An application for a permit was submitted to the Department on July 15, 2003 and accepted by the Department on August 4, 2003.

WASTEWATER CHARACTERIZATION

The concentration of pollutants in the discharge was reported in the permit application and in the engineering report. The proposed wastewater discharge prior to entry into the non-overflow lagoon is characterized for the following parameters:

Table 1: Wastewater Characterization

Parameter	Concentration
Flow	988 gpd max daily
BOD	400 mg/l
TSS	27 mg/l
Total Nitrogen	-----
TDS	-----

SEPA COMPLIANCE

SEPA was completed for the expansion of the wastewater system in August, 2003.

PROPOSED PERMIT LIMITATIONS

State regulations require that limitations set forth in a waste discharge permit must be either technology- or water quality-based. Wastewater must be treated using all known, available, and reasonable treatment (AKART) and not pollute the waters of the State. The minimum requirements to demonstrate compliance with the AKART standard are derived from the *Water Reclamation and Reuse Standards*, the *Design Criteria for Municipal Wastewater Land Treatment*, and Chapter 173-221 WAC. It was determined that retention in a lined pond of the wastewater liquids is AKART for this type of facility.

The more stringent of the water quality-based or technology-based limits are applied to each of the parameters of concern. Each of these types of limits is described in more detail below.

TECHNOLOGY-BASED EFFLUENT LIMITATIONS

All waste discharge permits issued by the Department must specify conditions requiring available and reasonable methods of prevention, control, and treatment of discharges to waters of the state (WAC 173-216-110).

MONITORING REQUIREMENTS

Monitoring, recording, and reporting are specified to verify that the treatment process is functioning correctly, that ground water criteria are not violated, and that effluent limitations are being achieved (WAC 173-216-110). At some time in the future there may be opportunity or need to irrigate with the wastewater from the pond. Monitoring being required will provide background justification for allowing this discharge.

WASTEWATER MONITORING

Monitoring, recording, and reporting are specified to verify that the treatment process is functioning correctly, that ground water criteria are not violated, and that effluent limitations are being achieved (WAC 173-216-110).

INFLUENT AND EFFLUENT MONITORING

The monitoring and testing schedule is detailed in the proposed permit under Condition S2. Specified monitoring frequencies take into account the quantity and variability of the discharge, the treatment method, past compliance, significance of pollutants, and cost of monitoring.

OTHER PERMIT CONDITIONS

REPORTING AND RECORDKEEPING

The conditions of S3 are based on the authority to specify any appropriate reporting and recordkeeping requirements to prevent and control waste discharges (WAC 173-216-110).

FACILITY LOADING

The design criteria for this treatment facility are taken from the March, 2003 engineering report prepared by SCM Consultants, Inc. and are as follows:

Maximum Daily flow (max. month):	9889 gpd
BOD influent loading:	33 lbs/day
TSS influent loading:	<3 lbs/day

The permit requires the Permittee to maintain adequate capacity to treat the flows and waste loading to the treatment plant (WAC 173-216-110[4]). For significant changes in loadings to the treatment works, the permit requires a new application and an engineering report (WAC 173-216-110[5]).

OPERATIONS AND MAINTENANCE

The proposed permit contains condition S.5. as authorized under Chapter 173-240-150 WAC and Chapter 173-216-110 WAC. It is included to ensure proper operation and regular maintenance of equipment, and to ensure that adequate safeguards are taken so that constructed facilities are used to their optimum potential in terms of pollutant capture and treatment.

SOLID WASTE PLAN

The Department has determined that the Permittee has a potential to cause pollution of the waters of the state from leachate of solid waste.

This proposed permit requires, under authority of RCW 90.48.080, that the Permittee develop and submit to the Department a solid waste plan to prevent solid waste from causing pollution of waters of the state.

GROUND WATER QUALITY EVALUATION (HYDROGEOLOGIC STUDY)

In accordance with WAC 173-200-080, the permit requires the Permittee to prepare and submit a hydrogeologic study for Departmental approval. The hydrogeologic study will be based on soil and hydrogeologic characteristics and be capable of assessing impacts on ground water. The study will be prepared using *"Guidelines for Preparation of Engineering Reports for Industrial Wastewater Land Application Systems,"* Ecology 1993.

GENERAL CONDITIONS

General Conditions are based directly on state laws and regulations and have been standardized for all industrial waste discharge to ground water permits issued by the Department.

Condition G1 requires responsible officials or their designated representatives to sign submittals to the Department. Condition G2 requires the Permittee to allow the Department to access the treatment system, production facility, and records related to the permit. Condition G3 specifies conditions for modifying, suspending or terminating the permit. Condition G4 requires the Permittee to apply to the Department prior to increasing or varying the discharge from the levels stated in the permit application. Condition G5 requires the Permittee to construct, modify, and operate the permitted facility in accordance with approved engineering documents. Condition G6 prohibits the Permittee from using the permit as a basis for violating any laws, statutes or regulations. Conditions G7 and G8 relate to permit renewal and transfer. Condition G9 requires the payment of permit fees. Condition G10 describes the penalties for violating permit conditions.

RECOMMENDATION FOR PERMIT ISSUANCE

This proposed permit meets all statutory requirements for authorizing a wastewater discharge, including those limitations and conditions believed necessary to control toxics, and to protect human health and the beneficial uses of waters of the State of Washington. The Department proposes that the permit be issued for with an expiration date of June 30, 2005. This results in less than a five-year permit.

The rationale for a less than standard five year permit is the Department's initiative to issue and manage permits by watershed. This permit is included in the Department's Walla Walla watershed, which schedules all permits in this watershed for issuance in FY2005. Issuing this permit with a June 30, 2005 expiration will place this permit into the proper watershed sequence.

REFERENCES FOR TEXT AND APPENDICES

Faulkner, S.P., Patrick Jr., W.H., Gambrell, R.P., May-June, 1989. Field Techniques for Measuring Wetland Soil Parameters, Soil Science Society of America Journal, Vol. 53, No.3.

Washington State Department of Ecology, 1993. Guidelines for Preparation of Engineering Reports for Industrial Wastewater Land Application Systems, Ecology Publication # 93-36. 20 pp.

Washington State Department of Ecology.

Laws and Regulations(http://www.ecy.wa.gov/laws-rules/index.html)

Permit and Wastewater Related Information (http://www.ecy.wa.gov/programs/wq/wastewater/index.html

Washington State Department of Ecology, 1996. Implementation Guidance for the Ground Water Quality Standards, Ecology Publication # 96-02.

Washington State University, November, 1981. Laboratory Procedures - Soil Testing Laboratory. 38 pp.

APPENDICES

APPENDIX A--PUBLIC INVOLVEMENT INFORMATION

The Department has tentatively determined to issue a permit to the applicant listed on page 1 of this fact sheet. The permit contains conditions and effluent limitations which are described in the rest of this fact sheet.

Public notice of application was published on October 27 and November 3, 2003 in the Walla Walla Union Bulletin to inform the public that an application had been submitted and to invite comment on the reissuance of this permit.

The Department will publish a Public Notice of Draft (PNOD) on January 8, 2004 in the Walla Walla Union Bulletin to inform the public that a draft permit and fact sheet are available for review. Interested persons are invited to submit written comments regarding the draft permit. The draft permit, fact sheet, and related documents are available for inspection and copying between the hours of 8:00 a.m. and 5:00 p.m. weekdays, by appointment, at the regional office listed below. Written comments should be mailed to:

Water Quality Permit Coordinator
Department of Ecology
Eastern Regional Office
4601 North Monroe Street
Spokane, WA 99205-1295

Any interested party may comment on the draft permit or request a public hearing on this draft permit within the thirty (30) day comment period to the address above. The request for a hearing shall indicate the interest of the party and reasons why the hearing is warranted. The Department will hold a hearing if it determines there is a significant public interest in the draft permit (WAC 173-216-100). Public notice regarding any hearing will be circulated at least thirty (30) days in advance of the hearing. People expressing an interest in this permit will be mailed an individual notice of hearing.

Comments should reference specific text followed by proposed modification or concern when possible. Comments may address technical issues, accuracy and completeness of information, the scope of the facility's proposed coverage, adequacy of environmental protection, permit conditions, or any other concern that would result from issuance of this permit.

The Department will consider all comments received within thirty (30) days from the date of public notice of draft indicated above, in formulating a final determination to issue, revise, or deny the permit. The Department's response to all significant comments is available upon request and will be mailed directly to people expressing an interest in this permit.

Further information may be obtained from the Department by telephone, (509) 329-3400, or by writing to the address listed above.

This permit was written by Andrew K.S. Tom, P.E.

APPENDIX B--GLOSSARY

Average Monthly Discharge Limitation--The average of the measured values obtained over a calendar month's time.

Best Management Practices (BMPs)--Schedules of activities, prohibitions of practices, maintenance procedures, and other physical, structural and/or managerial practices to prevent or reduce the pollution of waters of the State. BMPs include treatment systems, operating procedures, and practices to control: plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage. BMPs may be further categorized as operational, source control, erosion and sediment control, and treatment BMPs.

BOD_5--Determining the Biochemical Oxygen Demand of an effluent is an indirect way of measuring the quantity of organic material present in an effluent that is utilized by bacteria. The BOD_5 is used in modeling to measure the reduction of dissolved oxygen in a receiving water after effluent is discharged. Stress caused by reduced dissolved oxygen levels makes organisms less competitive and less able to sustain their species in the aquatic environment. Although BOD is not a specific compound, it is defined as a conventional pollutant under the federal Clean Water Act.

Bypass--The intentional diversion of waste streams from any portion of the collection or treatment facility.

Construction Activity--Clearing, grading, excavation and any other activity which disturbs the surface of the land. Such activities may include road building, construction of residential houses, office buildings, or industrial buildings, and demolition activity.

Continuous Monitoring –Uninterrupted, unless otherwise noted in the permit.

Engineering Report--A document, signed by a professional licensed engineer, which thoroughly examines the engineering and administrative aspects of a particular domestic or industrial wastewater facility. The report shall contain the appropriate information required in WAC 173-240-060 or 173-240-130.

Grab Sample--A single sample or measurement taken at a specific time or over as short period of time as is feasible.

Industrial Wastewater--Water or liquid-carried waste from industrial or commercial processes, as distinct from domestic wastewater. These wastes may result from any process or activity of industry, manufacture, trade or business, from the development of any natural resource, or from animal operations such as feed lots, poultry houses, or dairies. The term includes contaminated storm water and, also, leachate from solid waste facilities.

Maximum Daily Discharge Limitation--The highest allowable daily discharge of a pollutant measured during a calendar day or any 24-hour period that reasonably represents the calendar day for purposes of sampling. The daily discharge is calculated as the average measurement of the pollutant over the day.

pH--The pH of a liquid measures its acidity or alkalinity. A pH of 7 is defined as neutral, and large variations above or below this value are considered harmful to most aquatic life.

Soil Scientist--An individual who is registered as a Certified or Registered Professional Soil Scientist or as a Certified Professional Soil Specialist by the American Registry of Certified Professionals in Agronomy, Crops, and Soils or by the National Society of Consulting Scientists or who has the credentials for membership. Minimum requirements for eligibility are: possession of a baccalaureate, masters, or doctorate degree from a U.S. or Canadian institution with a minimum of 30 semester hours or 45 quarter hours professional core courses in agronomy, crops or soils, and have 5,3,or 1 years, respectively, of professional experience working in the area of agronomy, crops, or soils.

State Waters--Lakes, rivers, ponds, streams, inland waters, underground waters, salt waters, and all other surface waters and watercourses within the jurisdiction of the state of Washington.

Stormwater--That portion of precipitation that does not naturally percolate into the ground or evaporate, but flows via overland flow, interflow, pipes, and other features of a storm water drainage system into a defined surface water body, or a constructed infiltration facility.

Technology-based Effluent Limit--A permit limit that is based on the ability of a treatment method to reduce the pollutant.

Total Dissolved Solids--That portion of total solids in water or wastewater that passes through a specific filter.

Total Suspended Solids (TSS)--Total suspended solids is the particulate material in an effluent. Large quantities of TSS discharged to a receiving water may result in solids accumulation. Apart from any toxic effects attributable to substances leached out by water, suspended solids may kill fish, shellfish, and other aquatic organisms by causing abrasive injuries and by clogging the gills and respiratory passages of various aquatic fauna. Indirectly, suspended solids can screen out light and can promote and maintain the development of noxious conditions through oxygen depletion.

Water Quality-based Effluent Limit--A limit on the concentration of an effluent parameter that is intended to prevent pollution of the receiving water.

APPENDIX C—SITE MAP

APPENDIX D--RESPONSE TO COMMENTS